p. 582 #33:

$-3.10\ kJ$

$37.6\ kJ$

$W = -P(V_f - V_i)$

$= -P(V_{steam} - V_{water})$

$1\ mol\ H_2O = 18\ g$

$= -3.10\ kJ$

$\Delta U = Q + W \qquad Q = mL$

$= mL + W$

$= (.018\ kg)(2.26E6\ J/kg) + (-3.1\ kJ)$

$= 37.6\ kJ$